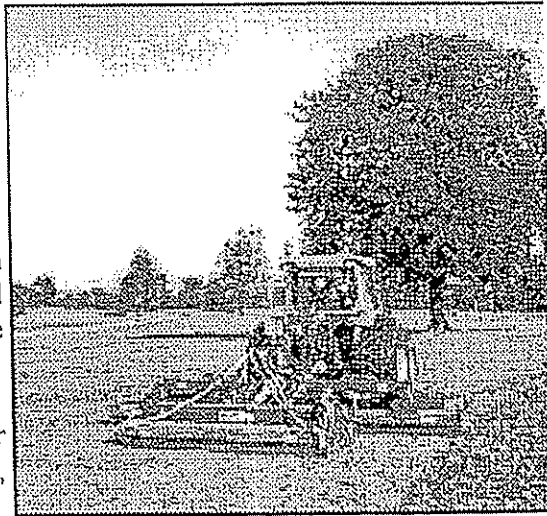


**GROUNDMAJOR TDR Rotary Gang Mower**

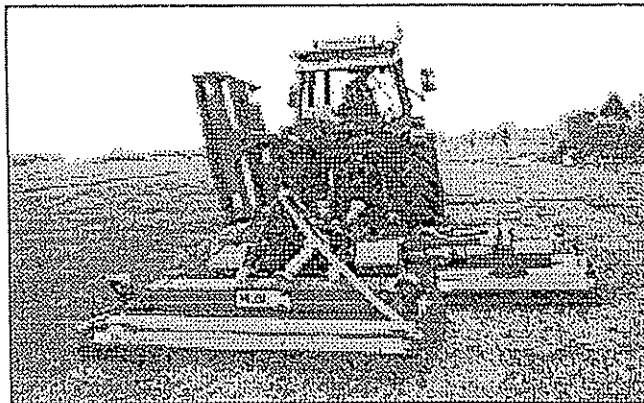
The GROUNDMAJOR TDR Rotary Gang Mower is a trailed machine leads the GROUNDMAJOR range with two models offering a 16' & an impressive 20' cutting width. These high tech models can easily manage the most undulating ground with each deck individually following the ground contours.

The machine cuts 12.5 & 16.5 acres/hour at 7 mph (16000 & 20000 models respectively) with the timed overlapping blades leaving a fine cut and a strip free finish.

The GROUNDMAJOR TDR Rotary Gang Mower is ideal for recreational areas, golf courses, airports, racetracks, parklands, etc.

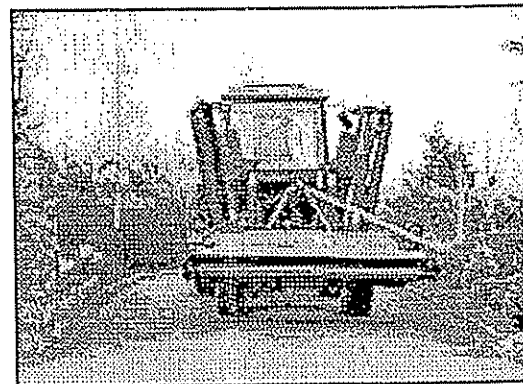


Safety is paramount with all MAJOR machines. The GROUNDMAJOR TDR Rotary Mower is no exception. All moving parts are enclosed and the aerofoil chambers control material. The rollers not only level roughed but also act as a safety barrier preventing other projectiles from escaping the confines of the body.



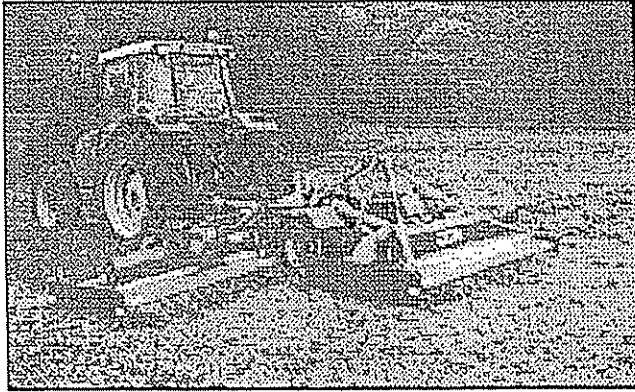
Road transport is easily catered for as the wings fold up over 90° by hydraulic control giving a transport width of 8'. The wing deck automatically switches off when raised into its transport position & must be reset manually when the rear deck is lifted from the ground giving clearance.

The two outer decks (wings) are equipped with a three-point pivot system allowing each deck to fit snugly into the ground contours. The machine can be used in tighter areas as the machine can be operated with one or both wings locked in transport position offering a reduced cutting width of 12' & 8'. Transmission power to the exposed rotors is automatically stopped when wing decks are raised and must be reset manually when lowered. The rear deck floats independently from the rest of the machine. As a bonus the rear deck is easily removed from the rest of the machine & connected to the tractor's three-point linkage in the normal way. This deck offers an 8 ft cutting width.



TDR

Page 2 of 2



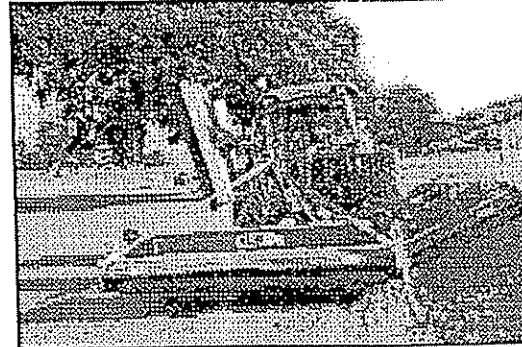
The transmission is protected throughout from blade through to the tractor. The rubber couplings located between each of the gearboxes cancel s loading

The tractor is insulated from transmission dam both shear-bolt protection and over-run clutch on the input PTO shaft

Power requirements are 65-120HP & 90-130 f 16000 & 20000 models respectively

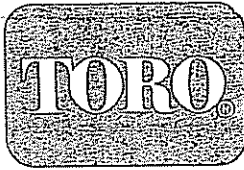
As mentioned, each cutting deck is equipped with rollers fore & aft rotating on steel housed roller bearings. The rollers control the cutting height, which is infinitely variable between 12 - 150mm (1/2" - 6")

The special aerofoil chambers recycle the cut grass, both mulching & causing it to be spread evenly in the wake of the machine



MODEL	PTO INPUT	HP	O/A Width	Transport Width	Transport Height	Wing Flootation		Wing Pivot		Weight
TDR 16000	540	65-120	5000 (16' 4")	2440 (8' 2")	2391 (7' 10")	90° up	15° down	10° side to side	6° front to rear	1600 kg
TDR 20000	540	90-130	6190 (20' 4")	2440 (8' 2")	3074 (10')	90° up	15° down	10° side to side	6° front to rear	1950 kg

## **EXHIBIT B**



The Toro Company

8111 Lyndale Avenue South, Bloomington, Minnesota 55420-1196  
• Phone 952/888-8801 • www.toro.com • Fax 952/887-8258

R. Lawrence Buckley, Division Counsel • Phone (952) 887-8909 • Fax (952) 887-7291 • larry.buckley@toro.com

August 7, 2003

Jim Berkeley, Director of Product Safety  
Textron  
11524 Wilmar Boulevard  
Charlotte, NC 28273

**Re: Textron Rear Roller Patents**

Dear Mr. Berkeley:

This letter is a follow-up to the letter dated August 1, 2003 sent to you by Mr. Tim Ford regarding this topic. I am the Toro in-house lawyer he mentioned in that letter, and enclosed is some additional prior art for your consideration. I'll briefly summarize these additional references below, and continue the "Exhibit 1, 2, etc." marking scheme that I employed in my July 31, 2003 memo to Mr. Ford (forwarded to you as an enclosure with the August 1, 2003 letter). As I am ethically bound not to communicate with you directly without your legal counsel's involvement, please provide a copy of this to your lawyer.

Enclosed as **Exhibit 5** is a copy of **another Nunes brochure**. This reference is potentially even more relevant than Exhibit 2 (attached to my 7/31 memo), given that the gang configuration (2 out front, 3 mid-mount) of Exhibit 5 is closer to the gang configuration shown, described and claimed in the Textron patents.

Enclosed as **Exhibit 6** is **U.K. Patent 1,520,883**, issued to Staniforth. The '883 patent discloses a gang of reel-type mowers (having rear rollers), wherein each reel "cutter" can be replaced by a rotary blade. See page 3, lines 55-60.

Finally, enclosed as **Exhibit 7** is **another packet of roller mower information** originating from the U.K. These materials make it clear that rotary mowers were commonly used on golf course roughs prior to Textron's filing date; and that the "banded," or striped, effect produced by rear-rollered rotaries has long been appreciated by those skilled in the art.

Given the amount and quality of prior art, showing full-width rear-rollered rotaries (single- and multi-spindled) for mowing golf course roughs, I am firmly convinced that Textron's "Rear Roller Patents" are invalid. But as he noted in his August 1, 2003 letter, Mr. Ford will return to Toro on August 18th, and I presume he'd be available to further discuss the matter if need be.

Sincerely,

A handwritten signature in cursive script, appearing to read "Larry Buckley".  
R. Lawrence Buckley  
Division Counsel

CORR03RLB.DOC/30  
Enclosures  
cc: Tim Ford

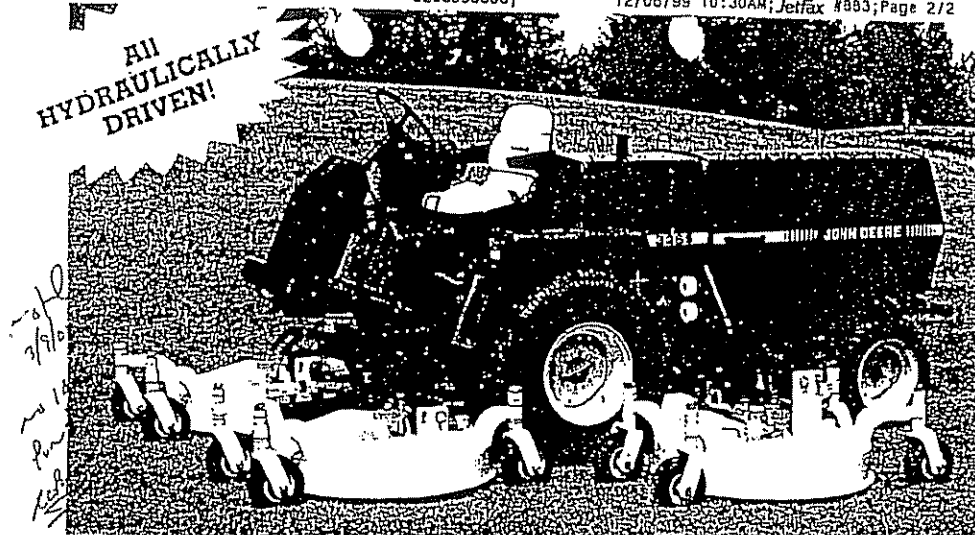
EXHIBIT 5

Sent by: RANSOMES TEXTRON

9206993683;

12/06/99 10:30AM; Jetfax #883; Page 2/2

ALL  
HYDRAULICALLY  
DRIVEN!

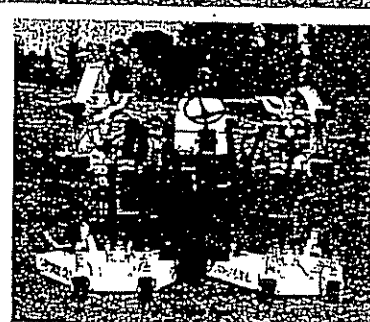


Introducing tomorrow's equipment today...

# Nunes

## Rotary Mower

John Deere 3365 Deck Attachment



- 5 Deck All Hydraulically Driven
- High Quality Finish Cut
- High Productivity
- 7.25 Acres an Hour at 5 M.P.H.
- Low Maintenance
- No Belts or Pulleys to Adjust or Maintain
- Easily Attached and Detached
- Raise Units for Transportation, Storage and Maintenance
- Blades Shut Off Automatically When Raised
- Height of Cut  $3/4"$  to  $4 1/4"$
- Cutting Width 140"
- Transportation Width 96"
- Nunes Model 355

4/91

Patent Mfg. Inc. reserves the right to make design, material and/or construction changes without notice or liability.

**Nunes Manufacturing**

P.O. Box 135 • 1707 Magnolia Ave. • Patterson, California 95363 • (209) 892-8773 • FAX (209) 892-5627



*Handwritten notes:*  
Note - 3/4" to 4 1/4"  
no 140" ft  
1/2" 1/2"  
1/2" 1/2"



EXHIBIT C

## PATENT SPECIFICATION

(11) 1 520 883

1 520 883

- (21) Application No. 25886/75 (22) Filed 18 June 1975  
 (21) Application No. 27203/75 (22) Filed 27 June 1975  
 (23) Complete Specification filed 12 Aug. 1976  
 (44) Complete Specification published 9 Aug. 1978  
 (51) INT CL<sup>2</sup> A01D 35/00  
 (52) Index at acceptance  
 A1F 6J3A 6J3B H27  
 A1B 2B7 2D5 2E1A  
 A1P 10B 8

(72) Inventors ERIC STANFORTH, GEORGE EDWARD HOBBS  
 and DOUGLAS ARTHUR EVERITT



## (54) GRASS TREATING APPARATUS

(71) We, SISIS EQUIPMENT (MACCLESFIELD) LIMITED, a British Company of Shoresclough Works, Hulley Road, Macclesfield, Cheshire SK10 2LZ do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention concerns gang mowers. It is not intended that the word "mower" should be construed as referring only to apparatus having conventional helically-bladed cylindrical cutters rotatable about a horizontal axis, but also to apparatus comprising any generally cylindrical cutting device for turf treatment, such as for example, a series of pointed blades rotatable about a horizontal axis used for thatch removal, or a radial or diametral horizontal blade rotatable about a vertical axis. Therefore, the word "mower" should in this specification and where the context admits, be construed accordingly.

According to the invention a gang mower for towing behind a tractor comprises an assembly having a plurality of turf treating units, hitch means for connection to a tractor three-point linkage, means for transmitting a drive to each unit and adapted for driven connection to the tractor power take-off, a connection providing a vertical pivot and a horizontal pivot between the hitch means and the assembly, and inextensible flexible means connected between the assembly and the hitch means for limiting relative movement between the hitch means and the assembly about the pivots.

The mower assembly may comprise a chassis, two front out-rigger mower units, and a rear mower unit.

The flexible means may comprise cables, and may comprise a first cable extending from the chassis round a pulley on the hitch means to a mounting on one side of the assembly, and a second cable extending from the chassis round another pulley on the hitch

means to a mounting on the other side of the assembly.

The invention may be performed in various ways and one specific embodiment will now be described by way of example with reference to the accompanying drawings, in which:

Fig. 1 is a detail side view showing the manner in which the gang mower is attached to a tractor;

Fig. 2 is a plan view corresponding to Fig. 1;

Fig. 3 is a schematic plan view of the mower during a turn; and

Fig. 4 is view in the direction of the arrow IV in Fig. 3.

The general lay-out of the gang mower can be understood from Figs. 1 and 2.

It consists basically of a chassis 10; two front outtrigger mowing units 12; a rear, centre, mowing unit 14; a rear, centre, castor 16; a hitch frame 18 for connecting the mower to a tractor 20; a pair of laterally spaced front castors 22 for supporting the front end when unhitched; a drive connexion 26 to the tractor 20; a right-angle drive conversion unit 28; and means for transmitting the drive to the mowing units 12 and 14 now to be described in detail. The drive conversion unit and the drive connecting means to the mowing units are as described in Application No. 56991/73 (1,506,702) to which reference may be made for further details.

The drive conversion unit 28 is mounted on top of the chassis 10. It has an input shaft 30 and an output shaft 32 (Fig. 1). The input shaft 30 extends longitudinally of the mower, and is universally jointed to the drive connexion 26, which latter is itself provided with a universal joint for direct attachment to the tractor power take-off. The output shaft 32 extends transversely of the mower. Referring now particularly to Fig. 1 it will be seen that the output shaft 32 carries a chain wheel 34 in a housing 35, which wheel 34

2

1,520,883

2

drives, via a chain 36, a counter shaft 38 mounted on the chassis 10. The countershaft 38 carries a further chain wheel 40 via which and a further chain 42 in a housing 43 and a chain wheel 44, the rear centre mowing unit 14 is driven. The countershaft 38 carries a further chain wheel from which the drive to the front mowing units 12 is transmitted via a chain and a chain wheel within chassis housing 10a. The drive conversion unit 28 also includes a slipping clutch adjusted to slip on any undesirable overload.

Each mowing unit 12 and 14 consists of a helically bladed cutter 60 of conventional nature and rotatable about a transverse horizontal axis, and a following ground engaging roller 62. The rollers 62 are each mounted on an adjustable frame 64 to enable the cutting height of the cutters 60 to be readily set at the desired level.

The mowing units 12 are mounted on the chassis 10 in such a way that they can within limits, follow ground undulations.

The cutter 60 itself is spaced from a fixed chassis plate 66 and carried between side plates 68, 70. Between the chassis plate 66 and the side plate 68 are a pair of double hinges 72 connected at their central parts by a bridge 74. Between the hinges 72 is a double universal joint 76 for transmitting the drive from the chain wheel to the cutter 60. The ends of each double hinge 72 are simply bolted to the chassis plate 66 and the side plate 68 respectively. One end of the double universal joint 76 is simply bolted to a stub shaft journaled in the chassis plate 66, whereas the other end is connected to the shaft of the cutter 60. Beneath each double hinge 72 is bolted a restrictor plate which limits the downwards hinging movement well within the capacity of the double universal joint 76.

The gang mower is intended to be attached to the three-point linkage of the tractor so that it may be lifted clear of the ground when desired, for example for transportation between sites or for lifting over large bumps such as roadside kerbs. Normally the power connection at the tractor end of the drive connection 26 will be disengaged before operating the three point linkage. Thus the hitch frame 18 carries three pins, a top pin 80 and two lower, laterally spaced, pins 82, respectively detachably connectable to an upper and two lower linkage arms 84 and 86.

The hitch 18 is in the form of an A as viewed fore and aft and includes upper cross bar 90. A lower cross bar 92 is pivoted at its ends at 92a to the lower ends of arms 18a of the hitch and has a central rear extension 94 connected at a vertical pivot pin 95 to a forward extension 96 of the chassis so that the chassis and cutters can pivot as a unit about a vertical axis relative to the hitch 18 and the tractor, and the hitch 18 can pivot

about a horizontal transverse axis 92a in relation to the extension 94. Secured horizontally to the front of the chassis is a transverse bar 97. The front ground engaging castor wheels 22 are connected to the cross bar 92.

Two pulleys 98, 99 are respectively pivotally mounted on the hitch bar 90 near its ends and are angled inwards (see Fig. 2). A first length 100 of steel cable is fixed at one end to a mounting pin 101 on the chassis, passes round the pulley 98 and is fastened at the other end to a mounting pin 102 on the bar 97. A second cable 103 has one end fixed to the mounting 101, passes round the pulley 99 and is fixed at its other end to a mounting pin 104 on the bar 97. In a preferred arrangement the mounting 101 is in the form of a turnbuckle to allow the lengths of the cables 105 106 extend respectively between the mountings 102, 104 and mountings, 107, 108 at the front of the cutter units 12. The cables 100 and 103 are of equal effective length, and the cables 105, 106 are of equal effective length, so that the normal position with the tractor pulling the gang mower forwards is seen in Fig. 2 with the cables slightly slack. Should the tractor turn to the right (Fig. 3) the cable 100 will slacken whilst the cable 103 is taut. Should the three cutter unit tend to swing clockwise (as indicated by the arrow) about the pivot 95 to an undesirable extent so as to leave an uncut strip of grass, this is prevented by the cable 100 which becomes taut to limit this pivoting movement. The reverse happens when the tractor turns left. Further more the cables 100, 103 prevent undue strain on the pivot 95 when the tractor drive is disengaged and when the whole unit is lifted from the ground by the three point linkage, and in this latter position the cables become taut and limit pivoting movement of the hitch 18 in relation to the mower assembly 12, 14. Additionally, when the unit is raised from the ground, the cables 100, 103 prevent the unit swinging undesirably and uncontrollably about pivots 95 and 92a so that the unit remains substantially as in Fig. 2 during transport.

The unit is manoeuvrable and can be used to cut close to kerbs and can be readily raised over large obstructions. The cutters readily rise and fall to effectively cut in depressions and other undulations.

A handle 120 pivoted to the chassis at a horizontal pivot 121 is adjustably connected through a pin and hole connection to a link 122 connected to the rear unit 14 to adjust the height of the rear unit.

In use as a three-gang mower, the mower is hitched to a tractor as shown and the drive shaft 26 connected to the tractor power take-off. With all mower units operative, the mower constitutes an efficient and versatile grass cutting apparatus.

3

1,520,883

3

All the cutters are driven from the tractor engine via the power take-off drive, the engine providing more than sufficient power.

The elimination of a multiplicity of driving ground wheels leads to high efficiency especially when cutting uneven surfaces. The cutters can follow ground undulations more closely for two reasons. First, the cutter is in close proximity to its following roller, and grass in depressions which would be missed by a conventional gang mower is cut. Second the mounting and driving of the mowing units 12 allows the units to follow quite extreme undulations in a direction transversely of the mower.

A further benefit is that wheel slip affecting the driving of the cutters cannot occur (since the wheels do not drive the cutters). As a consequence it is possible to cut relatively high grass and steep slopes even when the ground is wet and soft.

The cuts per yard and therefore the resulting finish can be varied within wide limits. With tractor in low gear it is possible to obtain 100 or more cuts per yard. Using higher gears the cuts per yard can be decreased to as few as 20, which is particularly useful when the quality of the finish is of little consequence.

Power driven cutters have the added advantage that the mower can cope with a wide variety of conditions. Thus, in the case of golf course work, the fairway can be cut to the required finish, and then, by means of a very quick height adjustment, the mower can operate in the semi-rough, cutting the grass to the new level. It is also possible to operate in the rough, topping-off taller grasses.

The absence of ground wheels outboard of the units 12 allows the overlap of verges along footpaths and roadways, thus obviating the need for coverage of such sectors with additional machines of a suitable type.

It is also to be noted that the tractor and mower may be moved in reverse, the mowing units remaining in line.

The invention is not limited to the detail features of the embodiment particularly described. For example, flexible drive shafts may be used instead of universally jointed connexions to transmit the drive from tractor to mower, or the individual mowing units, or both. It is possible for the castors 16, 22 to be omitted. The cutters can take other forms, for example blades or tines and may be such as to scarify the turf rather than cut the grass. Each cutter could comprise a horizontal radial or diametral blade rotatable about a vertical axis. Chains could be used instead of cables.

In a modification a device is provided for taking up some or all of any slack in the cables when the mower is lowered to engage the ground as shown in Fig. 1. One suitable device is attached to the cables in the region 101 and includes a lever connected to the cables and biased by a spring to a first position in which the slack is not taken up, the lever being arranged to engage the mower unit when this is lowered to the ground to move the lever against the spring force to cause slack to be taken up.

#### WHAT WE CLAIM IS:--

1. A gang mower for towing behind a tractor comprising an assembly having plurality of turf treating units, hitch means for connection to a tractor three-point linkage, means for transmitting a drive to each unit and adapted for driven connection to the tractor power take-off, a connection providing a vertical pivot and a horizontal pivot between the hitch means and the assembly, and inextensible flexible means connected between the assembly and the hitch means for limiting relative movement between the hitch means and the assembly about the pivots.

2. A gang mower as claimed in Claim 1, in which the assembly comprises a chassis, two front outrigger units, and a rear unit.

3. A gang mower as claimed in Claim 1, or Claim 2, including means for adjusting the effective length of the flexible means.

4. A gang mower as claimed in Claim 1 or Claim 2 or Claim 3, in which the flexible means comprises cables.

5. A gang mower as claimed in Claim 4, in which the flexible means comprises a first cable extending from the chassis round a pulley on the hitch means to a mounting on one side of the assembly, and a second cable extending from the chassis round another pulley on the hitch means to a mounting on the other side of the assembly.

6. A gang mower as claimed in Claim 5, in which the pulleys are mounted on a transverse hitch member above the horizontal pivot.

7. A gang mower as claimed in Claim 2, in which each front unit is connected to the chassis by a universal joint and by a flexible elongate connection.

8. A gang mower substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings.

Agents for the Applicants  
WILSON, GUNN & ELLIS  
Chartered Patent Agents  
41 Royal Exchange  
Manchester M2 7DB



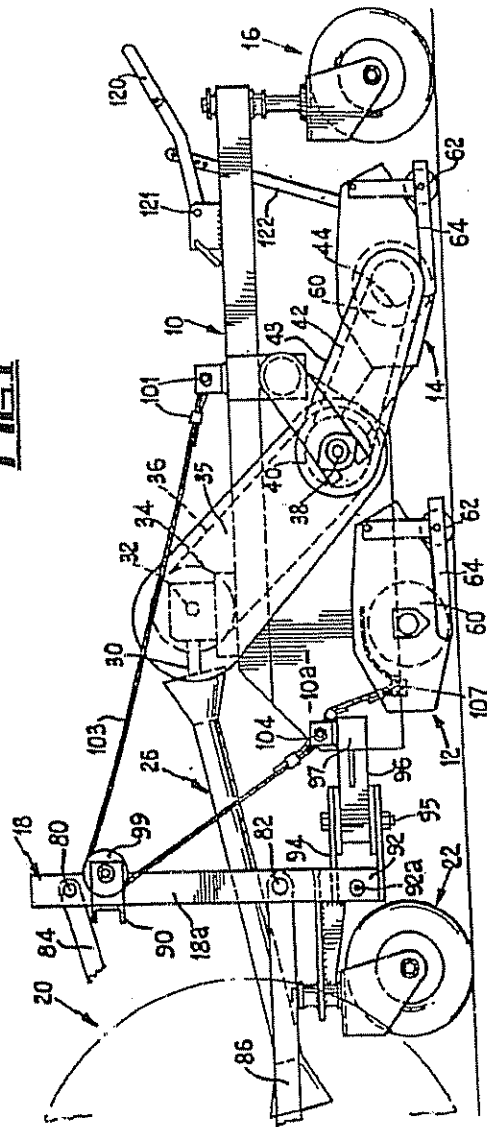
1520883

COMPLETE SPECIFICATION

3 SHEETS

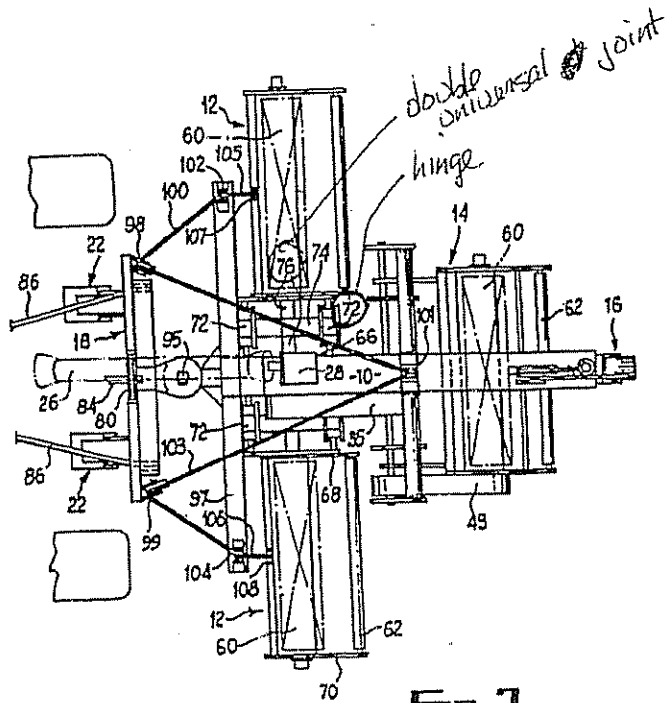
This drawing is a reproduction of  
the Original on a reduced scale  
Sheet 1

**FIG. 1**



1520883 COMPLETE SPECIFICATION

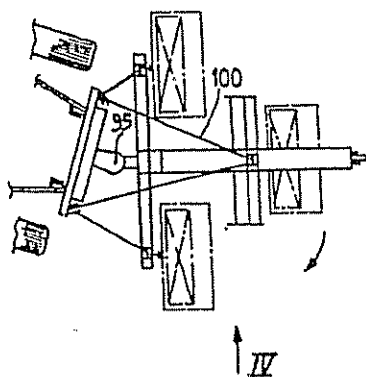
3 SHEETS This drawing is a reproduction of  
the Original on a reduced scale  
Sheet 2



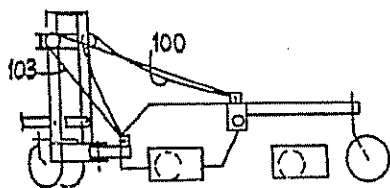
1520883 COMPLETE SPECIFICATION

3 SHEETS

*This drawing is a reproduction of  
the Original on a reduced scale  
Sheet 3*



**FIG. 3**



**FIG. 4**

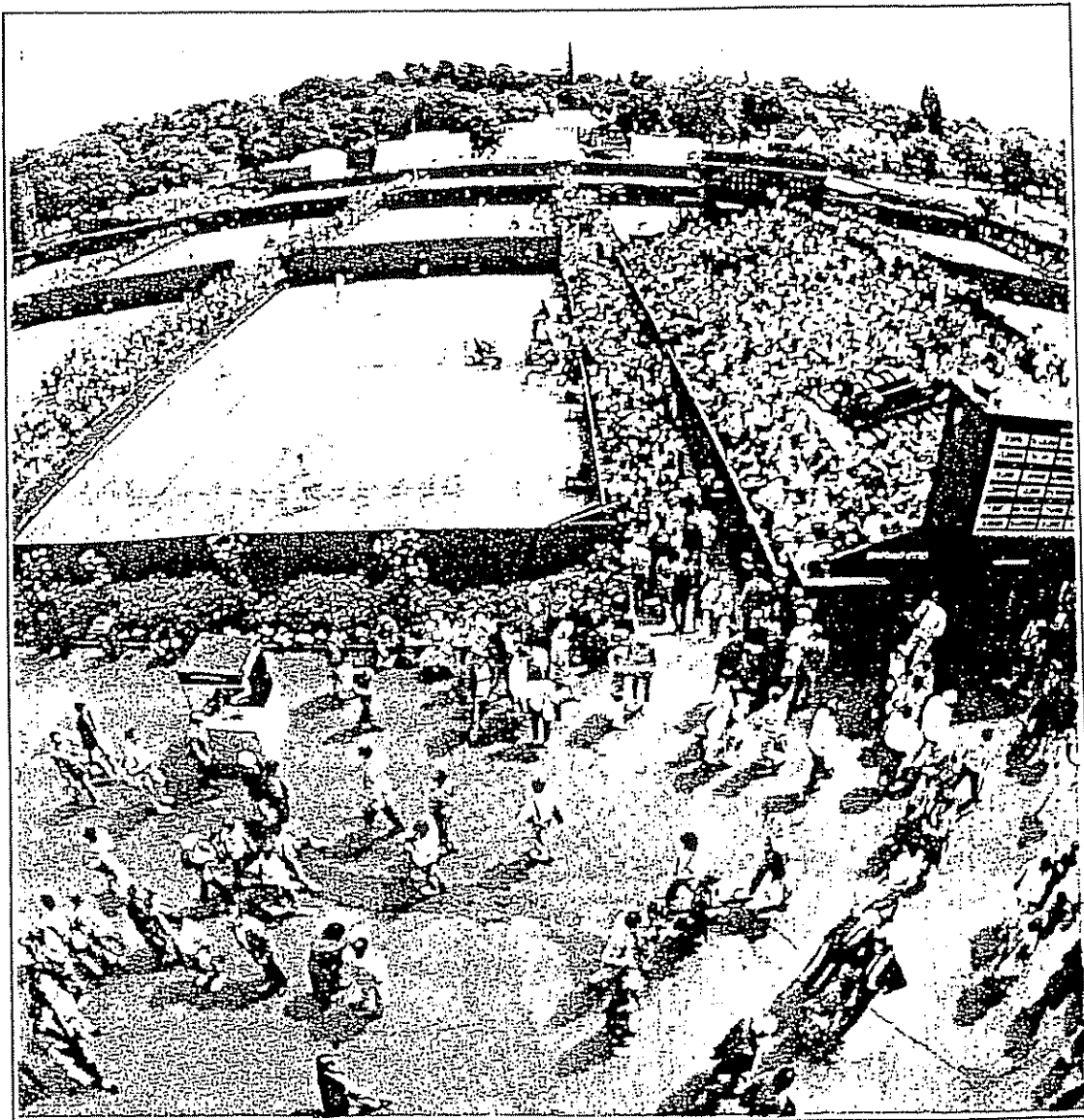
# GROUNDSTMAN

ESTABLISHED 1947

EXHIBIT 7

INCORPORATING 'PARKS AND RECREATION'

THE JOURNAL FOR THE SPORTS AND LEISURE PROFESSIONAL



Spelling Project 1000 Limited, London



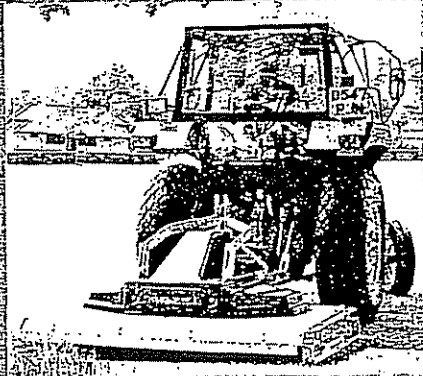
OFFICIAL JOURNAL OF THE INSTITUTE OF GROUNDSMANSHIP

Volume 42 : Number 4 : April 1989

£2.00

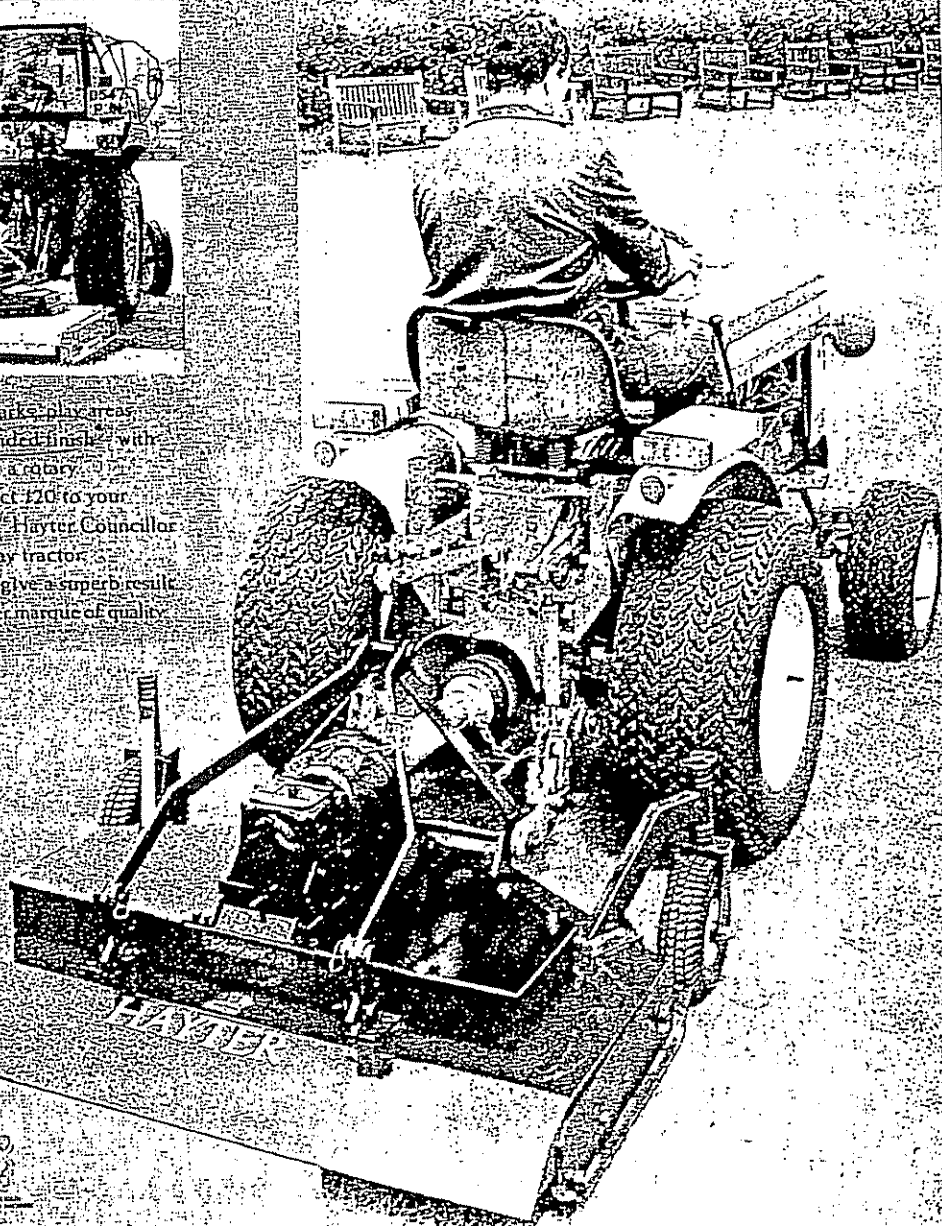


# TRACTOR MOWER ROTARY MOWER HAYTER



Now you can mow parks, play areas  
and fields to a fine, handed finish, with  
the economy of a rotary.

Add our 47" Compact 120 to your  
compact tractor. Or a 70" Hayter Councilor  
to your highway tractor.  
Both have rear rollers to give a superb result.  
And both carry the Hayter marque of quality.



# HAYTER

MAKERS OF THE FINEST MOWERS

Hayter Pl. C. Spellbrook, Bishop's Cleeve, Here. CM23 4BU, England  
Telephone: Bishop's Cleeve (0179) 723444. Telex: H1240.

## MEMBERS' BULLETIN

It proved to be a very good night with plenty of bite. It was very good to see members asking questions along the way. Dai gave us plenty to think about; the point on industrial classes was a very strong one which could have been overlooked, and by all accounts so is the point on training on machinery even though we are old hands.

Now we come to the sad news. I am very sorry to report that Tom Haines, our Quiz-master for many years, has passed away after an illness. Tom was held in very high esteem by our members, always supporting the Branch, and we had to fight for our points. He was a connoisseur of human nature, generous to a fault, and a genius in dealing with his fellow men. Tom will be sadly missed; we often talked well into the night in the latter days. We send our sincere sympathy to his wife Wyn and his family.

## BRISTOL

One of our February talks was given by the co-ordinator of the National Federation of City Farms, Ian Egginton-Metters. The Federation looks after the interests of more than 60 city farms and community gardens throughout the country, encouraging local people to take part in animal husbandry, growing vegetables, spinning, dairying and arts and crafts, for everyone from small children to senior citizens. The therapy of dealing with living things does a lot to help people living in inner city areas. See if there is a City Farm near you; they may be glad of any surplus materials you have around - they enjoy recycling things.

We have had two excellent walks recently. The first, in February, took us to the top of Brent Knoll, a well known 'lump' on the A38 near Burnham-on-Sea. About 16 walkers met at the village of East Brent and on a beautiful afternoon climbed the hill, circumnavigated the ancient earthworks at the top, and came down into Brent Knoll village before completing our circular tour.

In March we met at Keynsham Marina and followed the banks of the river Avon until we ascended on to the track of the old railway line between Bristol and Bath, which has been turned into the Avon Cycle and Walkway. Watching out for cyclists approaching from behind is not too easy on such a narrow track, but we managed it and

arrived at Bitton Station to see the 'Moths Day Special' getting up steam! Back across the fields to Keynsham completed another excellent social event.

On 13 March Geoffrey Davison from Cambridge Associates came to talk to us about drainage. A press release to interested parties drew in a few more bodies than our usual 10 or 12, and we were privileged to have not only a contingent from the Bath Branch, but also five intrepid travellers from the Devon and Cornwall area, who had driven up to Bristol after their day's work. It was good to have 25 in the audience who appreciated a very enlightening talk and, judging by their questions, will be able to apply some valuable expertise to improve their own grounds.

## LONDON ZONE

We are coming to the end of yet another season - what have we learned? Well, there is support for seminars and the feeling is that we should have more. Yes, I agree that we can move them about a bit, say over to London South East. Why not think about it? It will get support - let's say January 1990.

By the way, all those who can help on the stand at Chelsea Flower Show please ring Esher 63474 or contact your Branch secretary as soon as possible.

Your Zone will be meeting during the summer months, going over last season's card and looking at ways to improve. I personally think that we as a Zone committee should have a more personal contact with members to try to see one another's points of view. This is one way we can all learn from past mistakes; we need to be a force once again in the Institute. I for one can't see why we don't make representation to hold the National Conference in London - just look what we can offer. We are lagging behind - we have the best expertise in the IoG and we should not sit back and take it.

I can now give you the final details of our outing to Cardiff. We leave by Lewis Coach Ltd, Greenwich coach station, at 8am, then Victoria Coach Station, opposite the Victoria Theatre, at 8.30am prompt; these are the only two pick-up points apart from the ones on route. All times must be confirmed if you are to be picked up, apart from the two

main ones mentioned above. We shall visit Sophia Gardens Stadium and the County Cricket grounds. The ladies have not been forgotten; we stop in the centre of Cardiff before we leave for home about 6pm. We all meet our friends in Cardiff who have agreed to look after us for the day - many thanks to them. This programme may be altered due to the weather, but all in all we are in for a very nice time. May I remind you that the cost of this outing is only £10 per head, with a deposit of £5 now and the rest by 3 May, or pay in full on or by 3 May. We arrive back in London about 9.30 to 10pm. All seat bookings to Reg West, Hon Secretary, 7 The Close, Claremont Drive, Esher, Surrey KT10 9LY, or to your own Branch secretary now.

## MIDLAND ZONE

The Midland Zone held its AGM at Kenilworth Working Men's Club on 5 February 1989. Minutes of the last AGM on 7 February 1988 were read by the Secretary, M Reeves, and approved by L Shillcock and seconded by T Curtis.

The meeting saw R Murden and F Hammond stepping down as Chairman and Treasurer. On behalf of the Zone I would like to thank both for the tremendous amount of time and effort they gave for our great Zone, and I wish both of them well for the future.

The election of officers was as follows: Chairman, T Curtis. Coventry; Vice-Chairman, R Hatton. Nottingham; Secretary, M Reeves. Coventry; Treasurer, R Shacklock, Derbyshire; NEC delegate, T Curtis continues as Zone representative on the NEC for a further two years.

The next Midland Zone meeting is on 7 May at 11am.

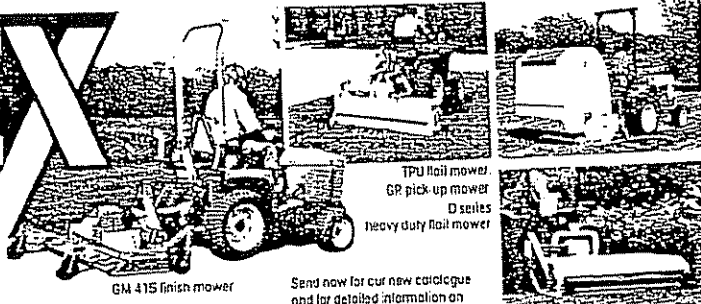
**HAVE YOU PAID  
YOUR SUB?  
IF NOT YOU WON'T  
GET THE MAY  
ISSUE OF THE  
JOURNAL**

# WESSEX

**Compact Tractor Attachments**

**Grass Maintenance Machinery**


Robust reliable Wessex mowers for Compact and full-size tractors are ideal for public authorities, contractors and private users. The range comprises three-bladed and single bladed rotary machines including the new GM 415 finishing mower; flail mowers for regular maintenance and rough-cut work; and the GR Pick-up mower for one pass mowing and grass collection.



TPU flail mower  
GR pick-up mower  
D seeder  
heavy duty flail mower

GM 415 finish mower

Send now for our new catalogue and for detailed information on Wessex mowers



**WESSEX FARM MACHINERY SALES CO**  
Tracing Estate, Oakhanger Road,  
Bordon, Hampshire GU35 9HH  
Telephone (04203) 8111



# GROUNDSTMAN

ESTABLISHED 1947

INCORPORATING 'PARKS AND RECREATION'

THE MAGAZINE FOR THE SPORTS AND LEISURE INDUSTRY PROFESSIONAL



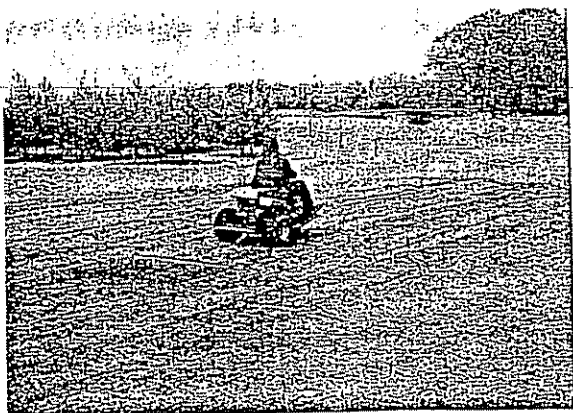
Sports Rights (UK) Limited, London



OFFICIAL JOURNAL OF THE INSTITUTE OF GROUNDSMANSHIP

Volume 41 · Number 2 · February 1988

£2.00



Drag matting - 'working-in' the top dressing ahead of play



The artificial lake which was constructed by the groundstaff

of our natural heritage

To implement all these projects, a team of six staff, including myself, are based on the New Course. Each member of staff has had some degree of college training, ranging from one year to four. This permits complete versatility amongst the staff, with no demarcation lines drawn between man and machine.

The only exception is the maintenance of all the equipment, which is becoming a more specialised operation. Most of this work is carried out in the workshop, which has been designed with this object

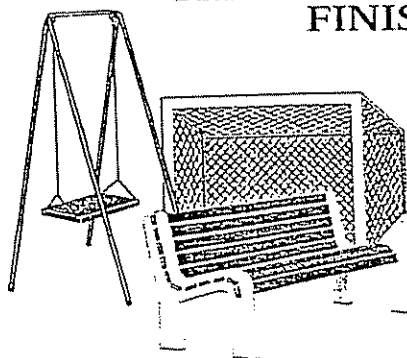
in mind. Two large storage buildings give excellent accommodation for the handling and preparation of materials, as well as providing ample parking space for a comprehensive range of machinery and accessories. The soil shed has approximately 1 100<sup>2</sup>ft of covered storage space, plus outside concrete loading bays providing a further 1 000<sup>2</sup>ft. The main garage covers about 3 000<sup>2</sup>ft, which includes the workshop and staff room/office. Staff facilities are both modern and comfortable, which leads to greater pride and efficiency on the course. Team-

work and sound management are essential if results are to be achieved.

At Minchinhampton the future looks bright, with continued development improving the stature of the course all the time. Future plans include extensions and additional facilities for the clubhouse and the possible acquisition of more land. In 1989 the club celebrates its first Centenary Year; this is an event to which we are all looking forward, with various activities arranged to commemorate this special occasion.

# NEW

## 1.20 METRE COMPACT TRACTOR PTO ROTAI THE NEW COMPACT 120 GIVES AN ECONOMIC FINISH TO SMALLER AMENITY GRASS A



Now there's a Hayter to mow play areas, small fields and parks beautifully—and economically. The new Compact 120. It has 3 low maintenance contra-rotating cutters, a rear roller to leave stripes, a front anti-scalp roller and castor wheels. It operates with compact tractors and as you'd expect, it's a robust, all-weather mower that's built to last.



# HAYTER

MAKERS OF THE FINEST MOWERS

Hayters P L C. Spellbrook, Bishops Cleeve, Herts CM23 4BU  
Telephone: Bishops Cleeve (0279) 723444. Telex: 81241



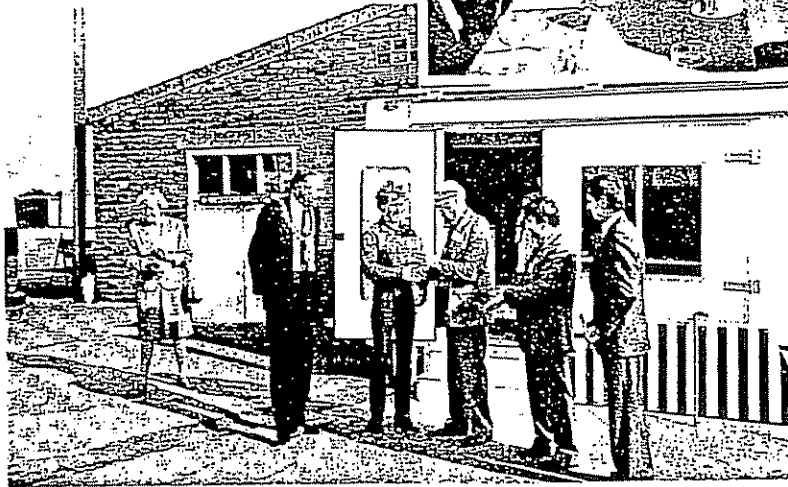
ONE OF THE RANGE OF HAYTER PROFESSIONALS





## Exhibition

Mr W H Bowles, BEM, lately Head Groundsman at Eton College, reminiscing with the Old Etonian Facilities manager, Haydock Park Racecourse, during a North-West Zone Exhibition lunch. At the same time, on the right of the table, Ray Johnston National Chairman, and Frank Scott, Organiser, are probably discussing the 1988 event



Also in the North-West, our Founder/President is seen presenting the NW Zone awards to T Reilly for the Inter Diploma and D Aartse-Tuyn for the National Practical & Technical Certificates. Mrs Betty Johnston, wife of the National Chairman, leads the applause

For golf courses, sports grounds and parkland, choose the 1.78m Hayter Councilor. Developed with Strathclyde Regional Council, it's the tractor PTO rotary for a superb banded finish at low cost.

MPWR  
BANDED  
AS

